

Title (en)  
DURABLE FLEXIBLE CIRCUIT ASSEMBLY

Title (de)  
BESTÄNDIGE FLEXIBLE SCHALTUNGSANORDNUNG

Title (fr)  
ENSEMBLE DE CIRCUITS FLEXIBLES DURABLES

Publication  
**EP 2979616 A1 20160203 (EN)**

Application  
**EP 15178863 A 20150729**

Priority  
US 201414446913 A 20140730

Abstract (en)  
The disclosure relates to a flexible circuit assembly (100) for an endoscope or borescope having an image sensor (122). The flexible circuit assembly has a flexible circuit (102) with a first end, a second end, and a length between its first and second ends, the first end of the flexible circuit electrically connectable with the image sensor. A strengthening member (104) is adjacent to the flexible circuit and along the length of the flexible circuit. An electrically insulated layer (106) retains the strengthening member adjacent to the flexible circuit and encloses at least a portion of the strengthening member and the flexible circuit. The strengthening member may comprise a nitinol wire, and the nitinol wire may have a neutral position such that the nitinol wire returns to the neutral position after being articulated to a different position.

IPC 8 full level  
**A61B 1/005** (2006.01); **A61B 1/00** (2006.01); **A61B 1/05** (2006.01); **G02B 23/24** (2006.01)

CPC (source: EP US)  
**A61B 1/00078** (2013.01 - EP US); **A61B 1/00114** (2013.01 - EP US); **A61B 1/005** (2013.01 - US); **A61B 1/0058** (2013.01 - US); **A61B 1/05** (2013.01 - US); **A61B 1/051** (2013.01 - EP US); **H04N 23/51** (2023.01 - US); **A61B 1/0051** (2013.01 - US); **A61B 1/0057** (2013.01 - US); **G02B 23/2476** (2013.01 - US); **G02B 23/2484** (2013.01 - EP US)

Citation (search report)

- [X] US 2002062082 A1 20020523 - OHARA KENICHI [JP], et al
- [X] US 2013012778 A1 20130110 - BAYER LEX [US], et al
- [A] US 2012310043 A1 20121206 - HU WEI-ZHI [JP], et al
- [A] US 6142930 A 20001107 - ITO KEIJI [JP], et al
- [A] US 5398689 A 19950321 - CONNOR BRIAN G [US], et al
- [A] US 2010041946 A1 20100218 - KIM GYUNG-SUB [KR]

Cited by  
EP3845146A3

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2979616 A1 20160203**; **EP 2979616 B1 20210407**; US 10348941 B2 20190709; US 10965845 B2 20210330; US 2016037027 A1 20160204; US 2019281196 A1 20190912

DOCDB simple family (application)  
**EP 15178863 A 20150729**; US 201414446913 A 20140730; US 201916425612 A 20190529